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<110> C. Frank Bennett
Kenneth Dobie

<120> ANTISENSE MODULATION OF SUPEROXIDE DISMUTASE 1, SOLUBLE
EXPRESSION

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<400> 138
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<210> 139
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<400> 140

aacatgcctc tcttc

15

<210> 141

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<400> 141

tactttcctt taaga

15

<210> 142

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<212> DNA

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<220>

<223> Antisense Oligonucleotide

<400> 142

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<210> 143

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<400> 143

gtacagccta tttat

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<210> 144

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<210> 147
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<400> 147
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<210> 148
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<220>
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<400> 148
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<210> 149
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<213> R. norvegicus

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gtttccgaggc cgccgcgcgt ctcccgggga agc atg gcg atg aag gcc gtg tgc 114
Met Ala Met Lys Ala Val Cys
1 5

gtg ctg aag ggc gac ggt ccg gtg cag ggc gtc att cac ttc gag cag 162
Val Leu Lys Gly Asp Gly Pro Val Gln Gly Val Ile His Phe Glu Gln
10 15 20

aag gca agc ggt gaa cca gtt gtg gtg tca gga cag att aca gga tta 210
Lys Ala Ser Gly Glu Pro Val Val Val Ser Gly Gln Ile Thr Gly Leu
25 30 35

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act gaa ggc gag cat ggg ttc cat gtc cat caa tat ggg gac aat aca 258
 Thr Glu Gly Glu His Gly Phe His Val His Gln Tyr Gly Asp Asn Thr
 40 45 50 55

caa ggc tgt acc act gca gga cct cat ttt aat cct cac tct aag aaa 306
 Gln Gly Cys Thr Thr Ala Gly Pro His Phe Asn Pro His Ser Lys Lys
 60 65 70

cat ggc ggt cca gcg gat gaa gag agg cat gtt gga gac ctg ggc aat 354
 His Gly Gly Pro Ala Asp Glu Glu Arg His Val Gly Asp Leu Gly Asn
 75 80 85

gtg gct gct gga aag gac ggt gtg gcc aat gtg tcc att gaa gat cgt 402
 Val Ala Ala Gly Lys Asp Gly Val Ala Asn Val Ser Ile Glu Asp Arg
 90 95 100

gtg atc tca ctc tca gga gag cat tcc atc att ggc cgt act atg gtg 450
 Val Ile Ser Leu Ser Gly Glu His Ser Ile Ile Gly Arg Thr Met Val
 105 110 115

gtc cac gag aaa caa gat gac ttg ggc aaa ggt gga aat gaa gaa agt 498
 Val His Glu Lys Gln Asp Asp Leu Gly Lys Gly Gly Asn Glu Glu Ser
 120 125 130 135

aca aag act gga aat gct gga agc cgc ttg gct tgt ggt gtg att ggg 546
 Thr Lys Thr Gly Asn Ala Gly Ser Arg Leu Ala Cys Gly Val Ile Gly
 140 145 150

att gcc caa taa acattcccta tgtgggtctga gtctcagact catctgctgt 598
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<211> 2026

<212> DNA

<213> R. norvegicus

<400> 150

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 cctcagaatt aaatcctgcc tcctgagtgt agcagaacat gcagttttat gcatgagctc 240
 ttgggagacc acagagattt caatttttaa aagagacagt tttctttttt agttgagaaa 300
 acaactttta cgggtccccag ctccggaaaa aaaaaaaaaa aagaaagaaa caacttttaa 360
 aagagacaat tctgttttta gttaagaatt ctctctctta ctgataccct ttcttggctc 420
 cagggactcc ccatatatct ttctagacat ttctgagaac tcaagtaaat atatggtgat 480
 gtctccccac ctttttttgt agtttgtacc ttttgctcat tccataccgt cttagaaaat 540
 atcttccttg aagcactatg tctcaccag tgcattggagt ttcacaaatg acttcatcag 600
 gcatcttggt ctccagcgca ggctgtctga gaacacttca acaggcaaaag aggatacgaa 660
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 ggggtactgag acggagggtg ctgagacgga ggatctcaaa tgaagtttag tcccatctct 780
 aaagttaaaa gaaagccagg tacacgcctc taaccccagc aactgggagg cagaggtcag 840
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 caaggtatag acggtgtgat attttttaaa ggaggtgtgt caaccggcag agcacatgtc 960
 tgtcacgagg ggtgtgtgta gtcaaattccc cagtaccaag taacaaaaaac attagtgaag 1020
 aataagtaac gtgatatgtg cccaggaatt agaaacctgc agagaggggt tggggattta 1080

gctcagtggt	agacggcttg	cctaggaagc	gcaaggccct	gggttcgatt	ccccagctcc	1140
gaaaaaaaga	accccccccc	caaaaaaaag	aaacctgcag	agaaaaaaa	aaaacctgca	1200
gagacacaga	ggtgtgtctg	gagatagaac	atgggcctta	cacatattac	accgagcatc	1260
catcttggt	caccccaact	ttcacacagc	aactgcggcg	cgctgcaaag	tcagtcgcaa	1320
tccgcatttc	tagacagagc	ggcttcagac	cttcaggcg	cgcacgcagg	cctcgccgag	1380
gtttcctccg	cgactcggcc	gacttcacag	ttagaagaca	atagcgactt	tcccagctct	1440
gtctcgattc	tggaactttc	tcagtcgcaa	gctcctgaag	ctggcgctcc	cctcagcccc	1500
gcccccaacg	tgccccgcgg	ccagggaact	tcagggaagg	taggcagaga	ccgcgggtag	1560
cgatttggttc	cctgccaagg	tgggagtggc	caggcacagg	catataaaag	ctccgcggcg	1620
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gctctcccag	gttccgaggc	cgccgcgcgt	ctcccgggga	agcatgatgg	cgacgatggc	1740
cgtgtgcgtg	ctgaaggggc	acggtccggt	gcagggcgtc	attcacttcg	agcagaaggc	1800
aaggcccggg	gcgctggagc	cagagccagc	ggtgacggcg	gacacctagt	gcgggacgca	1860
gccacgcccc	cgccgcggcc	tgagcccggt	aaatgctgag	tcaccgcggc	cttgaggagg	1920
ggcggcgcg	actagggag	cggggcgccg	cggggacctt	cggcgggtct	ctcgcgcccc	1980
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<210> 151

<211> 550

<212> DNA

<213> R. norvegicus

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gcctgacaca	gtgcagtagc	catccatttc	ctagtctga	cattgagctg	cccccttttg	180
ttcctctggg	tgcttttcaa	gtgctgttga	gtccaggtgt	ctgcacacgt	gcactctggaa	240
acaagtgtta	gggccgatgg	gtagggaggg	agaggcctag	agctaagcag	ctctagagtc	300
accctggagg	aaatgggtct	acttggattt	ggacataggt	ttgattttgt	tttgtttttt	360
gcattgtgcc	tttttcatgt	gattcagagt	attacacaaa	cttgatgtct	tattttttgta	420
ttttttaaat	aaggcaagcg	gtgaaccagt	tgtggtgtca	ggacagatta	caggattaac	480
tgaaggcgag	catgggttcc	atgtccatca	atatggggac	aatacacaag	gtaggtccta	540
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<210> 152

<211> 338

<212> DNA

<213> R. norvegicus

<400> 152

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tttaatttttg	tattttttta	aataaaggca	agcgggtgaac	cagttgtggg	gtcaggacag	180
attacaggat	taactgaagg	cgagcatggg	ttccatgtcc	atcaatatgg	ggacaataca	240
caaggtaagt	cttaatctat	ctctacctgg	tctgactagt	gagatgaatg	ggtcagagtc	300
aggaccaatt	actaaccatt	taaaaccatc	aatttttt			338

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<211> 799

<212> DNA

<213> R. norvegicus

<400> 153

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ttgtaccagg	gtgctgcttc	ctgtttgtat	cactccagca	cataccagct	ccatgtttgc	180
tgtgttgga	gttgtaagaa	ttccgatgtc	attgcataca	gagggttact	tcataatctg	240
actgctgggt	tctggttaata	ggctgtacca	ctgcaggacc	tcattttaat	cctcactcta	300
agaaacatgg	cgggtccagcg	gatgaagaga	ggtgagcagc	attctctcat	gcattggtggt	360

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ggagaggggt ctgtggaaaa cacctgaaga cagaactgag tggctcact gccttttctt 420
ttgtatgttt ccattcacc cactcccaca tcccgaagta ctggaatagt ttatatggg 480
tgaaggagct gacaaatgtg gactcttaag tgatttagtt ttgtagcatt tattgaagat 540
gaactaatac aagtgccaaa aggaaccaat acagaaaata tcatggataa cagtactatc 600
acgtcactag caaaggtaaa tcattgtata atatcattaa tgcagattaa taaaaactag 660
ttgagattcc gtttgtatgt gaaccttagg aagtccttca tattaagagg ctagctcttt 720
gaatgagctg gagcaaacct tcgtaatcag gagctgcata cttcgtaacc tcgaagtgcc 780
ttcttctaga gcagagtga                                     799

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<210> 154
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 <212> DNA
 <213> R. norvegicus

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agagcattcc atcattggcc gtactatggt ggtaagtttc catatagtag tagatgtagg 180
atctcttcta acatagtatt gtacctttcc atgacttcgt ggtggtggtt aaactagttc 240
ctaaaagatc acataaattg gtaagatgtt cagaatagga aaaaatatta ttttattgga 300
tgtaatagta aagaattaat ttgcctagtc agttaagaac gtcggttctg ctcgaagtgc 360
tggtagaaaag ctggttacat ttgatcagac tggatctgag ttgaggatac aatagtcttt 420
agtttaaaac agctggattt tcttgccatg attgccccct tacagttaat catttc 476

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<210> 155
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 <212> DNA
 <213> R. norvegicus

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tacttgatca cagaaaacct aatgttctta attcttttca aaggccacg agaaacaaga 180
tgacttgggc aaagggtgga atgaagaaag tacaaagact ggaaatgctg gaagccgctt 240
ggcttggtgt gtgattggga ttgcccata aacattccct atgtggtctg agtctcagac 300
tcatctgctg tcctgctaaa ctgtagaaac caaacatta aactgtaatc ttaacagttg 360
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gagtaggttt ggaggtatgt ggttgacaat tcctgaatgt gtacaactct tagaactaaa 480
tagtggtgtt ttctgtgccc agaccctcac tgggtggttt aagctgaaat ttctcttca 540
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agagagagag actgagactt atttagagct                                     630

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<210> 156
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gtcctttgaa gtattgctgg gaagaagtgc taattacttg atcaccgaaa cctaaatggt 180
cttaattctt ttcaaaggtc cagagaaaac aagatgactt gggcaaagggt ggaaatgaag 240
aaagtacaaa gactggaaat gctggaagcc gcttggtgtg tgggtgtgatt gggattgccc 300
aataaacatt ccctatgtgg tctgagctct agactcatct gctgtcctgc taaactgtag 360
aaaaaaacca aaccattaaa ctgtaatctt aacagttggt aactgtgtga ctcttttgac 420
ttgctctaag gacttgcagt gagaggtgac tgacgatgtt tggaggatgt gtagaacttc 480
ctgaatgtgt acaactcatt gaactaaaat ctgttggttc tgtgccagac ctcactggtg 540
taag                                     544

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<220>
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<210> 158

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<400> 158
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<210> 159
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<220>
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<400> 159
tgctgaaggg cgacgg

16

<210> 160
<211> 19
<212> DNA
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<220>
<223> PCR Primer

<400> 160
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19

<210> 161
<211> 23
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<220>
<223> PCR Probe

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ccggtgcagg gcgtcattca ctt

23

<210> 162
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<220>
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<220>
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<400> 163
gccgcaggaa acgaaggtgc 20

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<220>
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<400> 164
ctcggaacct gggagagcaa 20

<210> 165
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<220>
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<400> 165
ttcatcgcca tgcttccccg 20

<210> 166
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<220>
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acggccttca tcgcatgct 20

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<220>
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<400> 167
cacacggcct tcacgcat 20

<210> 168

<211> 20
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<220>
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<400> 168
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<210> 169
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<400> 169
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<210> 170
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<210> 171
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<210> 172
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<400> 172
ctgctcgaag tgaatgacgc 20

<210> 173
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<400> 173

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<210> 174

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<211> 20

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<223> Antisense Oligonucleotide

<400> 178

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<400> 180
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<210> 187
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<400> 187
tgtttcttag agtgaggatt 20

<210> 188
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<400> 188
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<210> 189
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<223> Antisense Oligonucleotide

<400> 189

acattgccca ggtctccaac

20

<210> 190

<211> 20

<212> DNA

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<210> 192

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<213> Artificial Sequence

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<223> Antisense Oligonucleotide

<400> 192

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<210> 193

<211> 20

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<223> Antisense Oligonucleotide

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<211> 20

<212> DNA

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<220>

<223> Antisense Oligonucleotide

<400> 194

aatggacaca ttggccacac

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<210> 195
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Val Ala Ala Gly Lys Asp Gly Val Ala Asn Val Ser Ile Glu Asp Arg	90	95	100	
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Val His Glu Lys Gln Asp Asp Leu Gly Lys Gly Gly Asn Glu Glu Ser	120	125	130	135
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